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ABSTRACT OF THE DISCLOSURE

A system and method for rapid processing of scene-graph-based data and/or programs is disclosed. In one embodiment, the system may be configured to utilize a scene graph directly. In another embodiment, the system may be configured to generate a parallel structure including a plurality of data structures and corresponding threads that manage the data originally received as part of the scene graph. The data structures and threads may be configured to convey information about state changes through the use of messaging. The system may include support for messaging between threads, messaging with time and/or event stamps, epochs to ensure consistency, and ancillary structures such as render-bins, geometry structures, and rendering environment structures.